A multi-method investigation of buyer power and supplier motivation to share knowledge

Abstract

Despite the importance of knowledge sharing between supply chain partners, supplier motivation to share remains largely unexplored. This study examines the role of buyer power in supplier motivation to share knowledge. Applying a multi-method, sequential research design, case studies followed by a scenario-based experiment, we find buyer expert power increases supplier motivation to share, while the use of coercive power decreases this motivation. We also find that supplier dependence has a contingent effect; when dependence is high, the effects of buyer expert power and use of coercive power on motivation are weakened. The study makes three key contributions. First, it begins to address the largely unanswered question of supplier motivation to share knowledge and, more specifically, how supplier dependence and buyer use of power impact this motivation. Second, by studying both the direct and interactive effects of power structure (dependence) and power use, the research enriches understanding of the power-influence process. Third, by adopting a research design that combines case studies and experiments, it provides a novel example of multi-method research in POM.

Key words: motivation, power, knowledge sharing, supply chain

1. Introduction

Supply chain partners can achieve significant benefits through knowledge sharing, including reductions in operating costs and cycle times, and improvements in flexibility and innovation capability (Craighead et al., 2009; Anderson and Parker, 2013). However, such arrangements represent significant social dilemmas (McCarter and Northcraft, 2007) in which collaboration can become a "learning race" and knowledge misappropriation is considered as a legitimate outcome (Hamel, 1991). Concerns over intellectual property (Handley and Benton, 2012), or a buyer taking the chance to demand a price-reduction (Henke Jr and Chun, 2010), can create strong incentives for parties to be uncooperative.

Based on the well-known MOA framework, successful knowledge sharing needs to have three factors: motivation, opportunity and ability (Siemsen et al., 2008). So far most research in knowledge sharing has focused on the latter two factors: Studies of opportunity seeks to understand the contextual factors that facilitate knowledge sharing, such as social ties (Reagans and McEvily, 2003), trust (Squire et al., 2009) and structure connectivity (Fawcett et al., 2007), while studies of ability seek to understand factors that enable knowledge sharing, such as absorptive capability (Cohen and Levinthal, 1990) and transfer capability (Szulanski, 1996). Yet, to date, the motivation factor, understood as a "willingness", a direct impetus toward a behavior, is largely unexplored and poorly understood (Wagner and Bode, 2014).

Specifically, this study was motivated to answer the research question: how does buyer power influence supplier motivation to share knowledge? Prior research (Constant et al., 1994; Bendoly and Swink, 2007) has suggested that behavioral factors can affect the willingness to share resources. Power, the capability to influence or constrain the behavior of another (Hunt and Nevin, 1974), is a central concept in understanding supply chain behavior (Shi et al., 2013), directly influencing supplier involvement, relationship commitment, payment terms and decision making (Carr et al., 2008; Zhao et al., 2008; Emery and Marques, 2011; Fast et

al., 2012). Supply chain power is both a structural attribute (Emerson, 1962; Carr et al., 2008; Petersen et al., 2008), reflecting the level of dependence between exchange partners (e.g. a supplier dependent on a single buyer for a large percentage of sales affords that buyer a degree of power) and a behavioral choice (Molm, 1990; Yeung et al., 2009; Handley and Benton, 2012a) whereby a party to an exchange can choose to use whatever power it may have to influence their partner's behavior (e.g. a buyer might offer incentives, such as increased business or shared cost reductions, to drive supplier performance improvement: Maloni and Benton, 2000, Benton and Maloni, 2005). Although most studies of supply chain power treat these dimensions separately, they are clearly interlinked (Molm, 1990) and therefore in this study we accommodate both structural power-dependence and power use in one setting and examine their direct and interactive effects on the suppliers' motivation to share knowledge.

The research applies a multi-method, sequential research design, comprised of case studies followed by a scenario-based experiment (cf. Bendoly and Cotteleer, 2008). Given that supplier's motivation to share knowledge is poorly understood, we first use case studies to investigate the phenomenon in its natural settings (Eisenhardt, 1989; Yin, 1989). Case studies are also ideal for reflecting on the multi-faceted power concept, allowing meaningful and relevant theory to be revealed through observing actual practices (Meredith, 1998). As a case-based study has its limitation in the generalization of the conclusions (Boyer and Swink, 2008), we subsequently conduct a scenario-based experiment to test the hypotheses to ensure the inference of causality (Boyer and Swink, 2008). A combination of case study and experiment thus provides a strong validation for the conclusions of the study.

This study contributes to the literature in three important ways. First, our study is focused on supplier motivation for knowledge sharing and, to date, motivation has been the missing building block in the development of useful knowledge sharing theories (Steers et al., 2004;

Wagner and Bode, 2014), Second, by investigating the direct and interactive effects of power-dependence and power use in the motivation process, this study enriches our understanding of supply chain power. Third, this study provides a novel example of a research design that includes case studies and scenario-based experiments. This multi-method approach combines the strengths of each method and helps overcome their respective limitations.

The paper is structured as follows. We first review the related literature in knowledge sharing and supply chain power. Next we describe our case study methodology including case selection, data collection and case analysis. Then we introduce the scenario-based experimental design and data analysis. After discussion of the results, the paper outlines its theoretical and methodological contributions as well as discussing key limitations and avenues for future research.

2. Theoretical background

Scholars have identified numerous factors that can influence the extent of supply chain knowledge sharing; including absorptive capability (Cohen and Levinthal, 1990), relational specific investment (Wagner and Bode, 2014), the nature of knowledge (i.e. ambiguity) to be shared (Simonin, 1999), inter-firm relational attributes such as trust (Levin and Cross, 2004; Squire et al., 2009), social ties (Adler and Kwon, 2002; Reagans and McEvily, 2003), and shared vision (Inkpen and Tsang, 2005). Yet despite many studies exploring the extent and nature of knowledge sharing, the specific motivations of any given supplier to share knowledge with their customers remain under-explored (Wagner and Bode, 2014). In examining cross-functional resources sharing in a project management setting, Bendoly and Swink (2007) considered the willingness to share not fully as a rational decision process but influenced by perception and social behaviors. Constrant et al. (1994) investigated employees'

sharing behavior and found prosocial attitudes support the behavior. In this study we sought to explicate this motivation with reference to a core theme in the supply chain literature, power (Cox, 1999).

Power, the capability to influence or constrain the behavior of another (Hunt and Nevin, 1974), can impact relationship commitment (Brown et al., 1995; Zhao et al., 2008), inventory levels and payment terms (Emery and Marques, 2011), supplier involvement (Carr et al., 2008), opportunistic behavior (Handley and Benton, 2012), supplier satisfaction (Benton and Maloni, 2005), decision-making (Fast et al., 2012), profitability (Chen et al., 2014) and supply chain efficiency (Shi et al., 2013). It also has an acknowledged role in knowledge sharing. Cai et al. (2013), for example, found that partners can be coerced into technical exchanges and technology transfer. Conversely, Ellis et al. (2012) found that a buyer could not simply leverage supplier dependence to access new technologies, but it was restraint in the use of power, perhaps diminishing fear of exploitation and creating a sense of equality, that enhanced knowledge sharing between supply chain partners (He et al., 2013).

To date however, research exploring the effects of power on knowledge sharing has some specific limitations that this study sought to address. First, power has been conceptualised in rather narrow terms - as a form of "coercion", either in its use (e.g. He et al., 2013) or dependence structure (e.g. Cai et al., 2013), whilst it is widely recognised that several "bases" of power can be qualitatively different from coercion. In their seminal study, for example, French and Raven (1959) distinguish five bases of power: coercion, reward, legitimate, expert and referent, the former two of which are termed mediated sources of power and the latter three of which are termed non-mediated. Mediated sources require the power holder to explicitly use their power to influence the targets, while non-mediated sources do not require use but are based on the perceptions of the power target. Second, power effect must be understood within a relational structure (Flynn et al., 2011); if a supplier is highly dependent

on a buyer, then this buyer will have a high level of power over this supplier. This power is created by a dependence relation, also termed as "structural power" (Molm, 1990).

2.1 Mediated and Non-mediated Power

The nature and effects of mediated and non-mediated power are quite different. Mediated power involves using extrinsic "objects" (i.e. rewards or punishments) to lead the power targets into "compliance" with desired behavior (Kasulis and Spekman, 1980; Brown et al., 1995). In contrast, non-mediated power involves the power targets' own willingness to accept the power sources' influences based on building a sense of belonging and identification with the power sources or a congruence of values and norms (Kasulis and Spekman, 1980; Brown et al., 1995). By its nature, mediated power is manipulative and instrumental and some authors argue this "flies in the face of the trust" that is at the heart of relationship commitment (Zhao et al., 2008), and therefore can be harmful (e.g. Boyle et al., 1992; Skinner et al., 1992). Conversely, non-mediated power is associated with intrinsic factors such as identification and internalization that can foster trust and normative relationship commitment. These positive effects have also been evidenced in empirical studies (e.g. Jonsson and Zineldin, 2003; Benton and Maloni, 2005).

Given mediated and non-mediated power are shown to have different relational outcomes, both types are included in our study. Specifically, we focus on coercion (mediated power) as the most common type of power exercised in buyer-supplier relationships (Hunt and Nevin, 1974) and expert power (non-mediated power), derived from the supplier's perception that the buyer has valuable knowledge that is desirable (French and Raven, 1959; Maloni and Benton, 2000), and therefore very closely related to the behavior of knowledge sharing.

2.2. Power Structure and Power Use

Power is, fundamentally, a relational construct residing in the dependence of an exchange relation (Emerson, 1962); if a supplier is highly dependent on a buyer, then this buyer will have a high level of power over this supplier. This is a form of "structural power" (Molm, 1990). On the other hand, the use of power is a strategic choice; a buyer could have high structural power over a supplier, but might choose not to exercise it. So structural power derived from dependence does not necessarily lead to power use, and the effect of power use is constrained by the dependence structure. Although some recent research has begun to show an interest in this interplay - Handley and Benton (2012a) for example conclude that when buyers are dependent on a supplier, they will reduce the use of mediated power and rely more on non-mediated power - most supply chain studies have focussed on *either* power-dependence structures (e.g. Carr et al., 2008; Chen et al., 2014) *or* power use (e.g. Yeung et al., 2009). We conclude therefore that it is critical to consider the effect of power use within a dependence structure (Markovsky et al., 1988) and our study examines their direct and interactive effects on supplier motivation to share knowledge.

This brief review of the literature leads us to a more specific research question: how does buyer coercive and expert power and supplier dependence influence supplier motivation to share knowledge? This study will take the first step to accommodate structural power-dependence and power use in one setting and examine their direct and interactive effects on supplier motivation to share knowledge.

3. Stage One: Case Study

The study began by exploring the research question with a case study methodology. Given the nascent state of existing theory (Wagner and Bode, 2014), such an approach allowed us to avoid being too reductive with a set of complex constructs and thereby provided the mechanism for meaningful and relevant theory to emerge (Meredith, 1998).

3.1 Case Selection and Data Collection

In selecting the cases, we used a theoretical sampling approach that follows the replication logic (Yin, 1994). The goal of theoretical sampling is to choose cases to fill theoretical categories such that each case predicts either similar or contrary results (Eisenhardt, 1989). Our cases are four dyadic supplier-buyer relationships composed of one buyer MetalCo and four of its suppliers in China. Using one buyer in the sample was deemed important in order to control case design content (Voss et al., 2002). With the same buyer, factors such as technology maturity, capital position, market position, supplier management policy, corporate culture and knowledge sharing orientation are held constant across all the cases and internal validity is therefore improved. MetalCo was selected because, at the time of the research, it was promoting knowledge-sharing with suppliers. This enabled us to focus on the motivation bases of the suppliers. Suppliers were selected with different level of dependence on MetalCo. Following previous studies (Carr et al., 2008; Ellis et al., 2012; He et al., 2013), we assessed the dependence by the percentage of sales attributable to MetalCo and the number of customers as a proxy of switching cost. We also looked for suppliers who had a similar relationship duration with MetalCo to minimize the variation in knowledge sharing caused by relationship length (Squire et al., 2009). At the same time we ensured there was a mix of company size and ownership type to maximize variance and enhance generalizability (Cui et al., 2012). We first met with the suppliers at a supplier workshop organized by MetalCo. We were given the chance to have conversations with a wide range of suppliers about their relationship history with MetalCo. This assisted us in selecting the cases. In total, 20 suppliers attended this workshop and four suppliers were selected for inclusion in the study (see Table 1). All participants were guaranteed professional and personal anonymity throughout the research process.

MetalCo is a leading multinational company in metal casting products. Established more than one hundred years ago, the company had a very early presence in China, establishing its first sales agency in China in the early 20th century. Since 2000, MetalCo started to source in China as part of their global sourcing strategy. Along with sourcing, they also set up factories in China and had 18 manufacturing plants at the time of date collocation. They currently have over 900 suppliers in China; with a purchasing value of approximately $20 billion per year. To enhance the supply chain performance, they regularly share knowledge with their suppliers through different training programs and joint problem solving.

The first point of the contact at MetalCo was the Purchasing Director. We explained our research objectives and also interviewed him about their supplier management policy. He then introduced the Country Six Sigma Director and Head of Process Mobilization Team who shared their attitudes towards knowledge sharing from both quality and technology management perspectives. The supplier informants included general managers and sales managers responsible for the interactions with MetalCo. To get a coherent view of the relationship we also interviewed purchasers at MetalCo who manage these suppliers. All interviews were conducted in the companies' premises in China and the interviews continued until the point of saturation was reached. All together 18 interviews were conducted, with an average of each running one hour.

This phase of the study relied on semi-structured interviews as a primary data source and other complementary sources including company documents, annual reports, website information, observations, emails, field notes and follow-up interviews to fill information gaps where needed. Since asking different questions (directive and nondirective) is recommended to provide stronger theoretical insights and mitigate biases (Eisenhardt, 1989), we included both in the interviews (see Appendix A). Interviews began with background

information about the company and the informant, followed by open-ended, nondirective questions about the buyer-supplier relationship in general. Next, their relationship history, including any problems or disruptions, was probed to reveal the buyer's use of power and its impacts. Finally we asked direct questions about knowledge sharing activities. After the interviews, we triangulated this data with other sources such as field notes, company website information, documents and follow-up phone calls to improve accuracy.

3.2 Data Analysis and Results

After data collection, we synthesized the data and constructed a description for each dyadic relationship (see Table 2). The information was organized based on the two primary theoretical interests of this study; power and knowledge sharing. We then advanced the descriptions into different conceptual categories and constructed a cross-case table (see Table 3) to present similarities and differences across the cases. We rated knowledge sharing activities as well as power level as high, medium and low, which allowed us to discern patterns between knowledge sharing and power. This pattern linking is explained in the following section.

3.2.1 Buyer expert power and supplier motivation to share knowledge

Buyer expert power is observed where the supplier perceives that the buyer has special knowledge or expertness that is desirable (French and Raven, 1959; Maloni and Benton, 2000). As shown in Table 3, MetalCo is deemed to have high expert power by S1 and S2 who felt they had benefited from MetalCo's knowledge: "*Our company grew up to today, have learned many ways of doing things from foreign companies like MetalCo. We are a private enterprise, local company; our boss is from Shanghai, my parents are workers, how can we have such ideas of doing things? I am very frank that we learned from foreign companies like MetalCo."* On the other hand, the expert power of MetalCo was challenged by S3 and S4.

Indeed, for S4, the perceived expert power of MetalCo was low: "*Those ... suppliers may feel they benefit a lot from their (MetalCo) knowledge; we do not have such feelings*".

In examining the relationship between buyer expert power and supplier motivation to share, we observed the following patterns. High expert power appeared to be associated with high knowledge sharing, medium and low expert power was associated with medium and low knowledge sharing. S1 and S2 used a variety of mechanisms to share (both wide and deep) knowledge with MetalCo, and also more actively sought chances to share. This was in direct contrast with S3 and S4 who mainly shared when they had to, e.g. sharing business manuals in the supplier auditing process. Taken together these observations led to our first hypothesis:

H1: Buyer expert power is positively related with supplier motivation to share knowledge with the buyer.

3.2.2 Buyer use of coercive power and supplier motivation to share knowledge

Coercive power can be used by firms to influence and enforce their will on other exchange parties. When a supplier fails to meet requirements or disagrees with a buyer, the buyer may use coercion to bring desired outcomes. MetalCo described the manner in which they use coercion at two levels. At a low level, which MetalCo termed "soft", it pointed out problems to the suppliers, and gave them time to improve. At a high level, which MetalCo termed "tough", it explicitly threatened suppliers, and acted on these threats (e.g. to reduce orders). Both "soft" and "tough" forms of coercive power were evident in the experiences of the four suppliers (see Table 2). S1 and S2 had been "softly" touched; MetalCo pointed out problems and worked with them to solve them, meaning that they hadn't perceived any feelings of threat to their relationships. In contrast, for S3 and S4, the coercion was tough: MetalCo had reduced their orders, which S3 described as a "huge" pressure: *"(MetalCo) will give us a lot*

of pressure… Because they have two or more suppliers, if you cannot deliver the orders, they will move them to other suppliers!"

In examining the relationship between the buyer use of coercive power and supplier motivation to share, we observed the following patterns. High use of coercive power seemed to be associated with low and medium levels of knowledge sharing, whereas low levels of coercion were associated with high levels of knowledge sharing. Both S3 and S4 are strategic partners of MetalCo but there was evidence that the use of coercion had hurt the relationship. S4 described how "frustrated" they were, "*We really helped MetalCo to be successful, high quality stuff, they grew with us, and now they say, we don't want you so much anymore as a partner!*". With the level of commitment to the partnership under question, they had very limited knowledge sharing with MetalCo. This was in contrast with S1 and S2 and leads to our second hypothesis:

H2: Buyer use of coercive power is negatively related with supplier motivation to share knowledge with the buyer.

3.2.3 Supplier dependence and supplier motivation to share knowledge

Moving on to consider the structural components of power, the case data seemed to suggest that buyer expert power provided a stronger motivation to share knowledge for those suppliers who were less dependent on MetalCo. For example, while MetalCo was responsible for less than 1% of the sales volume of S2, it still sought to benefit from knowledge sharing: "*We learned a lot from our customers like MetalCo. They are an important source for us to accumulate experience… Every time we solve problems together, it is an enhancement to us.*" Conventional wisdom enshrined in key account management would suggest that low levels of dependence would result in little knowledge sharing (Homburg et al., 2002), however our case studies suggest that suppliers were aware of the wider benefits. Expert power had

enabled S2 for example, to improve its product quality and production process which they hoped would lead to "*growth in the long-term*".

On the other hand, there was evidence that this effect might not hold in more dependent relationships. When asked about their motivations for knowledge sharing, S4 indicated that it was not a result of MetalCo's expertise (as S4 perceived the expert power of MetalCo low) but that: "*(knowledge sharing) would mean there is a commitment, to grow together. That would mean something bigger than the conversation. That would mean, ok, we are with you, we trust you, we are going to go with you, we are going to help you grow*". This may suggest that in the case studies, when dependence was high, knowledge sharing was acting more as a relational norm than an explicit incentive. This observation resonates with social exchange theory (Blau, 1964). As dependence increases and the exchange partner is not easily replaced, a relationship will shift from economic exchange to social exchange (Emerson, 1972), and in such as relationship, trust and mutual commitment are essential (Cropanzano and Mitchell, 2005). It thus might be plausible to speculate that as the dependence increases, the value of sharing behavior is found in its symbolism of trust and commitment rather than the value of the knowledge gained. These observations led to our third hypothesis:

H3a: The positive effect of buyer expert power on supplier motivation to share is stronger when supplier dependence is low than when supplier dependence is high.

Dependence also seemed to reduce the detrimental impact of coercive power. For example, S4 had experienced quite tough coercive action; MetalCo dropped their volume by 20%. They felt "frustrated", started to doubt the partnership and had significant concerns regarding knowledge sharing. Despite all these negative feelings, S4 still responded positively when MetalCo recently approached them about producing a new product based on a heating treatment technology in which S4 had some expertise. If the purchasing volume from

MetalCo had been smaller, the history of coercive power might have led them to simply turn down the proposal. However for S4, MetalCo was still their biggest customer who accounted for half of their business and it was just too much to lose, as S4 said "*this is a big project for us…*". Therefore the high dependency of S4 on MetalCo kept the willingness of S4 to share even after the hurting experience of coercion. These observations led to our fourth hypothesis:

H3b: The negative effect of buyer use of coercive power on supplier motivation to share is stronger when supplier dependence is low than when supplier dependence is high.

4. Stage Two: Experiments

The hypotheses were tested using a scenario-based experiment that manipulated aspects of buyer power and supplier dependence.

4.1 Vignette Development

There are three key factors in the study, namely supplier dependence (high/low), buyer use of coercive power (high/low) and buyer expert power (high/low), which results in eight treatment conditions. The vignette was based on a combination of the first-hand experience gained during the case studies (Bendoly and Cotteleer, 2008) and extant operationalization of the variables of interest (Rungtusanatham et al., 2011). Each vignette was composed of an introduction, manipulation materials and a conclusion. The introduction and conclusion sections were identical in the eight versions of each vignette and served to introduce the context of the scenario and managerial dilemma, while guarding against the framing effects stemming from variance (Rungtusanatham et al., 2011). The manipulation section introduced the experimental cues and therefore varied across the various combinations of dependence, use of coercive power and expert power.

Supplier dependence was manipulated based on the percentage of turnover attributable to the buyer, switching costs and the availability of alternative customers (Kumar et al., 1995; Carr et al., 2008). Use of coercive power was carefully manipulated to reflect power derived from the supplier's anticipation that the customer would inflict punishment if they did not follow the customer's requests. Lastly, expert power was manipulated to reflect the power derived from the supplier's perception of the customer's expertise in the field (French and Raven, 1959; Hunt and Nevin, 1974). Following Rungtusanatham et al. (2011), we used a combination of existing measurement scales and our case study material to develop the precise wording for the experimental cues. The two power constructs were based on the extant measurement scales of Zhao et al. (2008) and Handley and Benton (2012a), while the dependence variable was based on the scales of Kumar et al. (1995) and Carr et al. (2008).

Each participant completed two scenarios (cf. Mantel et al., 2006; Hora and Klassen, 2013), each with a different industry context (chemicals and metal casting). This approach increases the probability that the results are not driven by a specific industry context, and enhances construct validity and generalizability (Cook and Campbell, 1979). In both scenarios, participants assumed the role of a senior customer service manager, to gauge the extent to which they were motivated to share knowledge with a specific buyer firm. The managers faced a choice between the potential benefit of joint new product or technology development and the potential risk of knowledge leakage into their competitors. These particular benefits and risks were clearly observed in the case studies, and are also consistent with extant literature (Easterby-Smith et al., 2008; van Wijk et al., 2008). To control for the order effects, we randomized the sequence in which participants received the scenarios to ensure that the overall results of the study would not be significantly influenced by the nature of the sequence (Bendoly and Swink, 2007).

4.2 Study Participants

Study participants consisted of 75 EMBA and 35 MBA students enrolled in courses at three universities in China. Of these, 60% were male, 49% were over 35 years old (range 25 – 64), 96% were educated to at least bachelor's degree level, 44% had 5 – 9 years managerial experience and a further 36% over ten years' experience. Participants did not receive financial compensation for the study. Given that each of the 110 participants completed two scenarios, we derived a total of 220 vignettes.

4.3 Dependent Variables

The dependent variable for this study is the supplier's motivation to share knowledge. We modified the motivation to share items from Siemsen et al. (2008), adapting them from a co-worker context to that of a supplier-customer dyad. Participants were asked to evaluate the statements " (a) I had no intention to share this knowledge with this customer (R). (b) I was motivated to share what I know with this customer. (c) I really wanted to share this knowledge with this customer. (d) I meant to share this knowledge with this customer". All items were assessed on Likert scales on which 1 represented "strongly disagree" and 7 represented "strongly agree". Principal component analysis (PCA) showed these four items were highly correlated and loaded on one factor with a Cronbach's alpha $\alpha = 0.88$.

4.4 Manipulation Checks

We conducted checks for both the manipulations of our experimental cues and the extent to which participants deemed our scenarios to be realistic (Bachrach and Bendoly, 2011; Rungtusanatham et al., 2011). Results indicate that all three variables were manipulated as intended and the scenarios were realistic. We checked supplier dependence with a single item, which asked participants whether the company is dependent on the customer. Results

indicated that the mean score in the high dependency group were significantly higher than those in the low dependency group ($Dependence_{high} = 5.79$, $Dependence_{low} = 2.75$, $p < 0.001$). Similarly, coercive power was tested through a single item (this customer is likely to use his coercive power in attempting to get their way), and expert power was also tested through a single item (I see this customer as an expert in their industry). Again, the mean scores for the high groups were significantly higher than those in the low groups ($CoercivePower_{high} = 4.73$, $CoercivePower_{low} = 3.58$, $p < 0.001$; $ExpertPower_{high} = 5.41$, $ExpertPower_{low} = 2.61$, $p < 0.001$).

We used two items developed by Dabholkar (1994) to evaluate the realism of the scenarios. On a seven point scale, participants were asked the extent to which: (a) the scenarios is believable; and (b) they could imagine themselves in the situation. The mean score across the two checks was 5.35, which is comparable to prior studies (for example, Hora and Klassen (2013) report a mean of 5.25).

5. Results

Table 4 summarizes the descriptive statistics for each of our eight treatment conditions. Given that the respondents completed two vignettes, it is important to consider the possible variations in the observations caused by this within-subjects effect. Therefore, we applied generalized estimating equations to test the effects of three independent variables (IVs) on the dependent variable (DV) and included vignette as the within-subjects factor in the model. We specified the working correlation matrix as unstructured to estimate all possible correlations between within-subject responses and included them in the estimation of the variances. Table 5 reports the results. In terms of the within-subjects effect, the results demonstrate that the interactions between vignette and the three IVs are all insignificant on the DV. This suggests

that the within-subjects variation created by the two vignettes has no significant impact on the hypothesized relationships. The main effect of vignette on the DV is statistically significant, which might result from the industry contexts (chemicals and metal casting) in the vignettes, however as this is not of interest of this study, we do not discuss this effect here.

In terms of the effects of the three key variables on the motivation to share, results in Table 5 provide support for our hypotheses. First, high expert power is associated with higher motivation to share ($p < 0.01$), supporting H1. Second, high use of coercive power is associated with lower motivation to share ($p < 0.001$), supporting H2. Finally, the interaction effect of dependence was significant for both expert power ($p < 0.01$) and the use of coercive power ($p < 0.05$), supporting H3a and H3b respectively. As shown in Table 5, all the remaining two-way and three way interactions which we did not hypothesize are insignificant.

The moderation effects are illustrated in Figure 1 and 2. Relationships were plotted using the value 0 to represent low level of supplier dependence and 1 to represent high level of supplier dependence. As displayed, the figures show stronger associations between both buyer expert power and the use of coercive power, and supplier motivation to share knowledge in situations of low dependency. To further explore the specific relationships between power and motivation at particular levels of dependence, we compared cell means and conducted slope tests (Cohen et al., 2003) at the two levels of dependence. As shown in Figure 1, when dependence is high, the cell mean difference is not significant (t= -.577, $p = 0.565$), while when dependence is low, the cell mean difference is significant (t = -2.922, $p = 0.004$). The results suggest that buyer expert power has a significant effect on the motivation to share when supplier dependence is low, while the effect becomes insignificant when dependence is high. We also conducted slope tests to examine the effects and the results show that the slope is insignificant when dependence is high, while it is significant when dependence is low

(slope $_{\text{high dependence}}$ = 0.138, p =0.589, and slope $_{\text{low dependence}}$= 0.800, p = 0.002). These results further support the moderating effect of supplier dependence on the impact of buyer expert power on the motivation to share (H3a). Similar patterns were found in Figure 2. In the cell mean tests, the difference is not significant (t= 1.042, p = 0.295) when dependence is high, while the difference is significant (t = 3.100, p = 0.002) when dependence is low. The results suggest that when supplier dependence is low, buyer use of coercive power has a significant effect on the motivation to share while when dependence is high, the effect becomes insignificant. The slope test provided same conclusions; the slope is insignificant when dependence is high, while it is significant when dependence is low (slope $_{\text{high dependence}}$ = -0.249, p = 0.330, and slope $_{\text{low dependence}}$= -0.845, p = 0.001). These results further support the moderating effect of supplier dependence on the impact of buyer use of coercive power on the motivation to share (H3b).

6. Discussion

By applying a case study followed by a scenario-based experiment, this study examined how buyer power influences supplier motivation to share knowledge. The study shows a positive relationship between buyer expert power and supplier motivation. This relationship may be explained by the principles explored in social exchange theory. Knowledge sharing is by nature a social exchange, which is contingent on rewarding reactions from others (Blau, 1964; Emerson, 1976). In the exchange, partners need to perceive the potential benefit (e.g. reward) sufficient to balance the trade-off created by the trouble and energy needed in such interactions (Vanpoucke et al., 2014). We suggest a buyer expertise and knowledge serves as a potential for such a reward. In reciprocal social exchange (Emerson, 1972), suppliers will be motivated to initiate knowledge exchange when they perceive the buyer might offer valuable knowledge or expertise through the reciprocation process. This effect is clearly

shown in our case study. For example, S1 perceived substantial learning opportunities from the interactions with MetalCo and thus actively sought sharing knowledge with MetalCo. Similar effects are found in analogous settings. Bendoly and Swink (2007) found that the co-workers' information sharing behavior will positively affect a project manager's intent to share resources.

The study shows the detrimental effect of buyer use of coercive power on supplier motivation to share. This result is in line with most extant studies which report negative consequences of coercion (Hunt and Nevin, 1974; Maloni and Benton, 2000; Benton and Maloni, 2005). Buyer use of coercive power directly impacts the supplier perception of relationalism (Boyle et al., 1992), in particular relationship commitment. While buyer use of coercive power may result in supplier compliance (instrumental commitment), suppliers will become antagonized and less committed (normative commitment) to the relationship (Brown et al., 1995; Zhao et al., 2008). In such a situation, they are less likely to share knowledge voluntarily. This is clearly indicated by our case study. For example, S4 expressed doubts about MetalCo's relationship commitment after a substantial reduction in orders. Following this reduction, S4 also began to have concerns about knowledge sharing; "*Will they tell my competitors?*" and were therefore reluctant to share.

The study reports a moderating role of supplier dependence on the effect of buyer expert power. When supplier dependence is low, buyer expert power has a much stronger effect on supplier motivation to share than when the dependence is high. This effect could be understood from the difference between economic exchange and social exchange (Blau, 1964). Valuable knowledge shared from buyer is an explicit incentive in an economic exchange for suppliers to initiate a transaction in expecting reciprocal behavior in return; the value of the knowledge *per se* (expert power) is important in this transaction. While in social

exchange, knowledge sharing will be embedded in relational norms as "expected patterns of behavior" (Dwyer et al., 1987) rather than solely as economic transactions; knowledge *per se* has less incentive effect than what the sharing behavior itself indicates. As shown in our case study, S4 perceives low expert power of MetalCo, but it still considers their knowledge sharing important because, '*That (knowledge sharing behavior) would mean something bigger than the conversation (the knowledge shared)'*. This is because considering the risks associated with knowledge sharing (Handley and Benton, 2012), the behavior of sharing indicate trust and commitment which is vital to a deeper relationship in social exchange (Blau, 1964). In addition, when supply dependence is low, which often means share of sales from the buyer is relatively small, the supplier would be more motivated to engage in knowledge sharing with the buyer to improve its product quality and service and eventually its market share. For example, in our cases, MetalCo accounts less than 1% of S2's total business. With a strong hope to enlarge the business, S2 actively engages in knowledge sharing with MetalCo to improve their quality and as evidenced in the case, their share has increased by over 10% each year.

A moderation effect is also found between supplier dependence and buyer use of coercive power. When supplier dependence is high, the detrimental effect of buyer use of coercive power is weakened. This contingent effect could also find ground in the difference between economic exchange and social exchange (Blau, 1964). When supplier dependence is low, which means the exchanging partner can be easily replaced, the relation is more likely to be in an economic exchange in which the partner is interchangeable (Emerson, 1972). When the buyer uses coercive power, the supplier will be antagonized and react with less cooperative behavior such as unwilling to share knowledge. In comparison, when supplier dependence is high, which means the partner is specific and not interchangeable; it is a social exchange relation (Emerson, 1972). Suppliers will commit to this relationship and actively engage in

exchange resources to maintain the relationship (Dwyer et al., 1987). Although coercion will have a negative effect, for example, suppliers start to lose confidence in the relationship, they will not easily break off from this relationship as in the economic exchange and may nevertheless try to maintain and preserve the relationship. This resonates with the studies that indicated an iterative relationship between committed partnerships (Ring and Van De Ven, 1994; Vanpoucke et al., 2014). As shown in our case study, after all the complaints about MetalCo, S4 still said, *"... but in general, we are like old brothers"* and it responded positively to MetalCo's proposal of a new joint project.

The interaction between dependence and power use may also reconcile the conflicting results in the extant literature. For instance, He et al. (2013) found a negative effect for the use of coercive power on knowledge sharing, while Cai et al. (2013) reported a positive effect. In light of the moderating role of dependence structure, the use of coercive power becomes less harmful when the dependence increases, and it is thus possible that when the dependence is very high, it may even enhance the knowledge sharing as the results of Cai et al. (2013) indicated. So the findings of these two studies are not conflicting as it seems, but need to be accommodated under different levels of dependence. This again highlights the importance of studying power effects under the dependence structure; otherwise it may lead to opposing results.

The results also reveal a positive relationship between supplier dependence and their motivation to share. This was not in our hypotheses but resonates with extant empirical studies that dependency will increase the level of socialization, participation and involvement (e.g. Carr et al., 2008; Petersen et al., 2008). The gained resource (e.g. revenue) inherent in the dependence may drive the supplier-buyer interactions (Ellis et al., 2012). This relationship should be further validated through empirical studies.

7. Conclusion and Future Work

This research deployed an original multi-method research design to extend our understanding of supply chain knowledge sharing. It addressed the, to date, largely unanswered question of supplier motivation to share knowledge and, more specifically, how dependence and power impact this motivation. By studying both the direct and interactive effects of power structure (dependence) and power use, the research also enriched understanding of the power-influence process.

We highlight two key conclusions. First, that exchange dependence (i.e. the structural attribute of power) moderates the effects of using (both coercive and expert) power; such that their effects are stronger in those circumstances where exchange dependence is low. Second, suppliers are more motivated to share knowledge with a buyer who has expert power but buyer use of coercive power will reduce this motivation. These conclusions have some significant implications for practice. The significance of buyer expert power in encouraging suppliers to interact and share their own knowledge further reinforces the importance of buyer capability development (cf. Brusoni et al., 2001) – a process that can seem to be at odds with an outsourcing logic that emphasizes increased specialization of knowledge and practice. Similarly, the use of coercion should be approached with caution. Although it has been suggested that supply chain partners can be forced to give out knowledge (Cai et al., 2013), our research suggests that such a tactic will only be effective in low dependence exchange. Buyer use of coercion will ultimately undermine any aspiration for supplier knowledge sharing (and mutual benefit, etc.).

In addition to these important findings, the study demonstrated the benefits of using multi-method research design. The initial case studies enabled us to observe the multi-faceted nature of power in a natural setting and let meaningful theory emerge (Meredith, 1998). The inherent limitations of a case study approach (e.g. in the generalization of any conclusions)

were then addressed by also using scenario-based experiments with their greater levels of control, internal validity (Boyer and Swink, 2008), etc. Moreover, the case studies provided us rich material that was used in the scenario development, addressing the specific challenge of maintaining realism in scenario-based experimentation (Rungtusanatham et al., 2011).

The principal limitation of this study is that we chose to examine only two bases of power (cf. French and Raven, 1959), coercive and expert, in the motivation model and future studies are needed to extend this conceptualisation (i.e. to also consider reward, legitimate, and referent power). In addition to broadening the model of power, it would also be fascinating to consider additional motivational bases for knowledge sharing. For example, how might supplier knowledge sharing happen not based on exchange structures but rather in a trusted relationship based on shared beliefs and values of partners (Barney and Hansen, 1994). It would be interesting to test this and other motivational bases in future research. On the methodology side, a limitation of the study is that we did not record the order of the vignettes when they were distributed; with that information, we may be able to conduct further analysis, e.g. separating the sample based on the order, to unpack the order effect and enrich our understanding the nature of the sequence.

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Table 1 Suppliers profile

	Product	**Founded**	**Sales**	**Staff**	**Ownership**	**Location**	**Customer number**	**Purchasing volume**	**Relationship length**	**Informants**
S1	Ancillary material and tools	1999	$24 M.	80	Private owned	Shanghai	> 200	< 10%	7	Senior Sales Manager; Purchaser at MetalCo
S2	Chemical	1995	$130 M.	300	Multinational	Shanghai	> 400	< 1%	5	Regional Industry Director; Sales Manager
S3	Casting parts	2007	$16 M.	80	multinational	Suzhou	6	30%-50%	6	Sales Manager, Purchaser at MetalCo
S4	Casting parts	2004	$ 26 M.	130	multinational	Kunshan	3	50%	9	General manager, Sales Manager, Supply Chain Manager, Purchaser at MetalCo

Table 2 Summary of power and knowledge sharing activities involving MetalCo

S1	S1 started as a trading agent with a strong service focus, and it later established its own technical center to provide technique service for precision machining abrasive, fixtures, gages, etc. As a private, local company, being a supplier of MetalCo provides a quality assurance for S1. S1 is also inspired by the corporate culture and working spirits of MetalCo, which it wants to follow. Working with MetalCo is also an important way for S1 to learn quality and production management as well as general managerial skills. This added value brings a lot of energy to S1 to interact with MetalCo. Its people visit MetalCo at least every week to see how the products work, talking with engineers and managers about the problems they met. With the knowledge gained from a wide range of its customers, S1 processes a good understanding of products and techniques in the market, which it actively shares with MetalCo. Based on its proposals, MetalCo has successfully completed two projects on cost reduction. In return, S1 was given more orders and new business, e.g. MetalCo started to buy cutting tools from S1. Although sometimes there were problems such as quality issues, MetalCo creates an open and equal atmosphere in which S1 feels free to discuss with MetalCo and finds out solutions together.
S2	S2 is specialized in producing processing oil. As a relatively new entrant compared with its major rivals, being a supplier of MetalCo has given S2 market recognition. The relationship between S2 and MetalCo was not love-at-first-sight; the sales to MetalCo are almost negligible compared to its big customers, such as steel companies. However through working together, S2 found itself very similar to MetalCo in values and visions, e.g. both are highly customer-orientated and continuously develop new technologies. MetalCo is also an important source for S2's knowledge base; it learns manufacturing and production management from MetalCo; its skills have been honed and the product quality has been improved. Also as a knowledge-engineered company, S2 likes the sparks with MetalCo which may lead to new ideas for products or process improvement. All these have brought these two companies closer and S2 is passionate about knowledge sharing with MetalCo. Based on its expertise, S2 shares know-how and know-why with MetalCo to optimize the manufacturing process to raise productivity and reduce cost. It also voluntarily helps MetalCo to solve problems which were not caused by its products. E.g. S2 spent half a year to help MetalCo in solving a rusting problem, which MetalCo appreciated very much. Besides technological knowledge, they also share knowledge in managing supply chains and business stories which they can learn from the success or failure of each other. It is unavoidable to have quality problems or disagreements in some issues, but S2 does not consider them as 'trouble'. Instead, through communication and joint-problem solving, S2 finds they can understand each other better and the relationship is deepened afterwards. Although a latecomer, S2 has been gaining ten percent more share each year and has become the biggest supplier of MetalCo for this line of product.
S3	S3 is a multinational company and a strategic partner of MetalCo at the global level. When MetalCo established its factories in China, S3 followed the step and built up its factory in Suzhou. However this strong partnership did not lead to close interactions at the regional level (China). Years ago, these two companies had a dispute about a testing standard. S3 insisted on its own standard and did not want to follow that of MetalCo. MetalCo was very unhappy and reduced its purchasing volume. This finally resulted in S3 changing its sales manager to smooth the relationship with MetalCo. The new manager learned a lesson from this dispute and thus just

	follows every request from MetalCo. The relationship got better and orders started to come back. Nevertheless, this event has created a passive atmosphere in this relationship. S3 feels that there is a lack of culture to have suppliers' voice, and it is passive in every term; it 'just obeys'. Even fully admitting that it has improved its product quality and production management due to the training provided by MetalCo, S3 felt it was a 'passive' enhancement. There is a lack of energy in interactions. The communications are very limited, mainly about orders operation and quality control. There is also not much knowledge sharing; it happened only when S3 must provide MetalCo with business reports and manuals in the auditing process or in problem solving. The ultimate goal of all its activities is to meet requirements from MetalCo, because S3 is fully aware if it does not, MetalCo can move the orders to other suppliers.
S4	S4 is also a strategy partner of MetalCo at the global level. It also followed MetalCo to China and established its factory in Kunshan. Being a partner for many years, S4 had thought they understood each other very well and have the similar ways of running business and the commitment to the partnership. However this confidence started to shake by an action MetalCo took two years ago. As part of its risk management strategy, and also as a warning to S4 in terms of its relatively slow response speed and high price, MetalCo cut the orders to S4 by 20%. This made S4 very frustrated. It started to doubt the commitment towards the partnership, which has brought a big question mark towards activities such as knowledge sharing. Confidentiality is a big concern. Losing ground to its competitors, S4 prefers to keep the knowledge to itself for cost reduction rather than sharing with MetalCo. Besides, very different from other suppliers, S4 does not feel it benefits very much from the knowledge or expertise of MetalCo. It considers itself as an expert in the field and also quite matured in managerial skills, thus there is not much to learn from MetalCo. In such a circumstance, the communication between S4 and MetalCo is limited, which is mainly about quality issues and manufacturing process. However, S4 still wants very much to work with MetalCo, its biggest customer and also a hallmark company in the industry. So when recently MetalCo approached it about applying a new heat treatment technology which S4 has expertise in, S4 still accepted the work. In addition, S4 needs more orders. When it built up its factory in Kunshan, S4 estimated a much larger production capability than currently utilized. Now half of the factory is still empty, S4 simply needs to get more orders to fill the production lines.

Table 3 Cross-case analysis

	Supplier dependence	**Use of coercive power**	**Expert power**	**Knowledge sharing**
S1	Low • Easy to find another customer	Low • Orders were not reduced but given time to improve • Openly discuss the problem and try to find a solution together	High • Learned a lot in quality, manufacturing process and managerial skills • Consider people in MetalCo really good at what they are doing	High • Breadth: marketing &sales, quality, and manufacturing process • Explicit knowledge sharing: business reports and manuals • Implicit knowledge sharing: extensively share know-where based on market expertise • Personnel involved: general management, sales, quality • Proactive, looking for chances to exchange • Seeking long-term reward and new business opportunities, e.g have successfully completed two projects on cost reduction
S2	Low • Easy to find another customer	Low • Orders were not reduced but given time to improve • Openly discuss the problem and try to find a solution together	High • Improved product quality from being a supplier of MetalCo • An important source of their knowledge base • Have 'spark' with MetalCo which generates new ideas	High • Breadth: marketing & sales, techniques, quality, manufacturing process, and R&D • Explicit knowledge sharing: business reports and manuals, business models, success and failure stories. • Implicit knowledge sharing: extensively share know-how and know-why from work experience • Personnel involved: general management, sales, quality, R&D • Proactive, looking for chances to exchange • Seeking long-term reward and business opportunities, e.g NPD, process optimization
S3	High • Biggest customer • Difficult to find another customer buying so much	High • Orders were reduced once after a dispute • Clearly feel the threat of orders being moved to other suppliers	Medium • Improved quality control and production management by MetalCo' training, although passively • Had a dispute about a testing standard, didn't consider every standard from MetalCo correct	Low • Breadth: mainly about quality • Explicit knowledge sharing: business reports and manuals • Implicit knowledge sharing: not much • Personnel involved: general management, sales, quality • Passive, only when have to • Focusing on meeting the requirements from MetalCo

S4	High • Biggest customer • Difficult to find another customer buying so much	High • Orders were reduced by 20% • Clearly feel the threat of orders being moved to other suppliers	Low • Do not feel benefit much from the knowledge of MetalCo, neither in technology knowledge nor general managerial skills	Medium • Breadth: quality and manufacturing process • Explicit knowledge sharing: business reports and manuals • Implicit knowledge sharing: not much • Personnel involved: general management, sales, quality • Mainly passive, but occasionally proactive when seeing new business opportunities • Focusing on meeting the requirements from MetalCo but also seek new business opportunities

Table 4 Dependent variable cell means (Std. Deviation) and number of observations

Supplier dependence	Buyer use of coercive power	Buyer expert power	Mean(SD)	N
Low	Low	Low	4.56 (1.16)	26
Low	Low	High	4.98(1.26)	25
Low	High	Low	3.17(1.53)	29
Low	High	High	4.53(1.38)	28
High	Low	Low	4.84(1.21)	29
High	Low	High	5.11(1.04)	31
High	High	Low	4.62(1.54)	26
High	High	High	4.69(1.30)	23

Table 5 Results of model effects

Variables	Type III	
	df	Wald Chi-Square
(Intercept)	1	1802.104 ***
Vignette	1	4.553*
Dependence	1	17.369 ***
Use of coercive power	1	21.369 ***
Expert power	1	9.947 **
Dependence * Use of coercive power	1	3.943 *
Dependence * Expert power	1	6.700 **
Use of coercive power * Expert power	1	1.250
Dependence * Use of coercive power * Expert power	1	2.025
Vignette * Dependence	1	.100
Vignette * Use of coercive power	1	.808
Vignette * Expert power	1	1.253
Vignette * Dependence * Use of coercive power	1	.536
Vignette * Dependence * Expert power	1	.027
Vignette * Use of coercive power * Expert power	1	.302
Vignette * Dependence * Use of coercive power * Expert power	1	1.256

Dependent Variable: MOT
Model: (Intercept), Vignette, De, CoP, ExP, Vignette * De, Vignette * CoP, Vignette * ExP, De * CoP, De * ExP, CoP * ExP, Vignette * De * CoP, Vignette * De * ExP, Vignette * CoP * ExP, De * CoP * ExP, Vignette * De * CoP * ExP
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 1 The moderating effect of supplier dependence on expert power and motivation to share

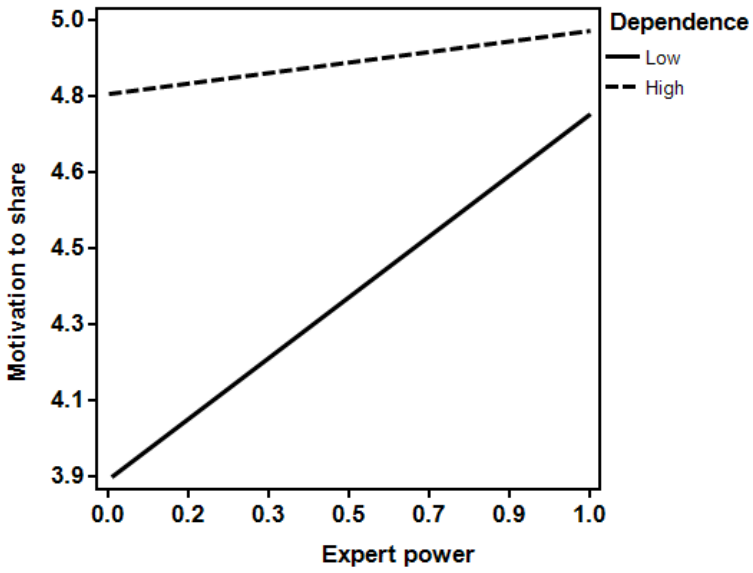
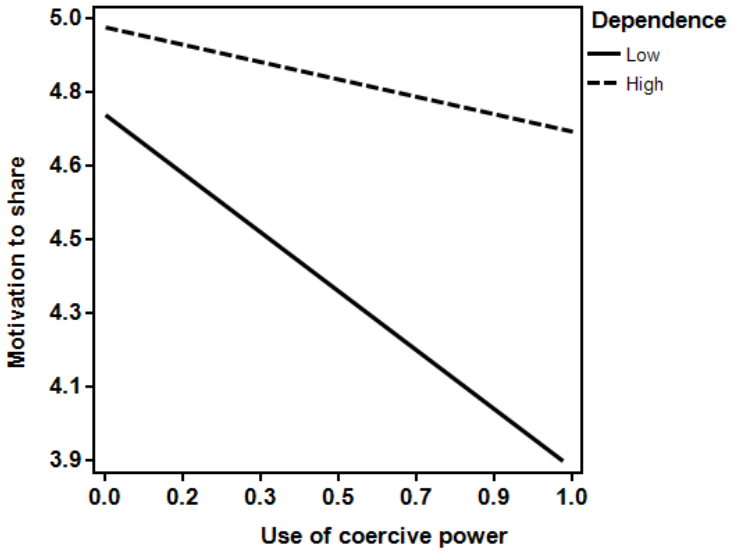


Figure 2 The moderating effect of supplier dependence on use of coercive power and motivation to share



Appendix A Interview guidelines

Background information

- Company history, # of employees, products, sales etc.
- How long have you worked in this company? How many years have you been in this position?

Questions about the buyer-supplier relationship

- How important is X to your company? The item/part purchased, purchasing volume, change over time? How many other customers you have?
- How long have you been a supplier of X? Why and how did you begin working with X?
- How do you get along with X? How did you get to the current relationship? How has it changed over time? Ups and downs?
- Any disruptions or problems happened with X? What has happened? How did you solve it? What lessoned have you learned? Especially in terms of your relationship?
- What do you perceive to be the main benefits of this relationship? What are the key challenges?
- What do you think works well in this relationship? What you hope to improve?

Questions about knowledge sharing

- How do you describe the knowledge sharing level with X? How often do you communicate? In what occasions? What do you share? Who get involved?
- If you have knowledge or technology which may lead to an innovation project with X, would you like to share with X? Why?

Appendix B Description of the vignettes

	Introduction	Conclusion
Vignette 1	You are a senior customer service manager for a mid-sized lubricants producer. Your company provides a special type of lubricant for machine tool manufacturers to use in the process of production. You have many customers, one of whom you have supplied for 3 years. The business interactions between you and this customer are described below. Assume all scenario descriptions are accurate and trustworthy. After reading the scenario, please indicate to what extent you'd like to engage in knowledge sharing with this customer?	Recently your customer has mentioned to you that there is a corrosion problem with the products. As a lubricant producer, you have some knowledge about corrosion problem. This is an opportunity to exchange knowledge with the customer, which may lead to new product development. However at the same time, if you offer to share the knowledge, there is also a risk that this knowledge may be leaked to other suppliers, i.e. your competitors. In such a situation, how would you be most likely to react?
Vignette 2	You are a senior customer service manager for a mid-sized steel ball producer. Your company provides different types of balls for bearing manufacturers. You have almost one hundred customers, one of whom you have supplied for 4 years. The business interactions between you and this customer are described below. Assume all scenario descriptions are accurate and trustworthy. After reading the scenario, please indicate to what extend you'd like to engage in knowledge sharing with this customer?	Recently your customer needs a special size of ball which needs to be produced with a special technology. You have some knowledge about that technology. Your customer has called to ask about that information. It is opportunity to exchange knowledge which may lead to new technology development. However at the same time, if you offer to share the knowledge, there is also a risk that this knowledge may be leaked to other suppliers, i.e. your competitors. In such a situation, how would you be most likely to react?

	High	Low
Supplier Dependence	This customer is of great importance to your company. The turnover is almost half of your business, and there are very few, if any, competitive customers to provide you the same scale. You cannot switch to them without incurring significant costs.	This customer is not very important to your company. The orders from this customer are less than 10% of your turnover. And there are many competitive customers for your products. You can switch to them without incurring significant costs.
Buyer use of coercive power	Your customer often hints that they would reduce your orders if you did not go along with their requests. And you are fully aware that if you cannot meet their requirements, they would move these orders to your competitors.	When you failed to meet with your customer's requests, they would not reduce your orders right away. Instead they would point out the problems and give you some time to improve. During this period, they would also follow up and give feedback with patience.
Buyer expert power	You consider your customer a significant authority in this field. The technique and expertise that it has are of great value to your company. Communications with this customer are helpful in developing new technical skills and new products. When solving problems together, the expertise from this customer can improve your mastering of the technology you use and improve the quality of your products.	You do not consider your customer an authority in this field. The technique and expertise that it has do not provide much value to your company. Communications with this customer are not helpful in developing new technical skills and new products. If there is any problem with your products, you find the discussion with your customer can not provide useful suggestions.